

Amendments to the Claim:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A metabolically engineered yeast having a native operative first metabolic pathway in which glyceraldehyde-3-phosphate is transformed into a second metabolite in a reaction in which NAD (Nicotinamide adenine dinucleotide, oxidized form) is a cofactor for NAD-dependent glyceraldehyde-3-phosphate dehydrogenase (GAPDH), said reaction step producing NADH (Nicotinamide adenine dinucleotide, reduced form), and in which said second metabolite is transformed into 3-phosphoglycerate in a reaction catalysed by a kinase,

and having an operative second metabolic pathway characterized by an enzyme activity of NADP-dependent glyceraldehyde-3-phosphate dehydrogenase (GAPN) expressed in said yeast by at least one copy of a genetic sequence encoding said GAPN which has been recombinantly introduced into said yeast, said GAPN catalyzing a non-reversible reaction in which NADP (Nicotinamide adenine dinucleotide phosphate, oxidized form) is a cofactor and NADPH (Nicotinamide adenine dinucleotide phosphate, reduced form) is a product and in which said glyceraldehyde-3-phosphate is transformed into 3-phosphoglycerate without the involvement of said kinase.

2-10. (cancelled)

11. (previously presented) A yeast as claimed in claim 1, which is a yeast belonging to the genus *Saccharomyces*, *Klyuveromyces*, *Candida*, *Pichia*, *Debaromyces*, *Hansenula*, *Yarrowia*, *Zygosaccharomyces* or *Schizosaccharomyces*.

12. (previously presented) A yeast as claimed in claim 11, which is a strain of *Saccharomyces cerevisiae*, *S. kluyveri*, *S. bayanus*, *S. exigus*, *S. sevazzi*, *S. uvarum*, *Klyuveromyces lactis* *K. marxianus* var. *marxianus*, *K. thermotolerans*, *Candida utilis* *C. tropicalis*, *Pichia stipidis*, *P. pastoris*, *P. sorbitophila*,

*Debaromyces hansenii*, *Hansenula polymorpha*, *Yarrowia lipolytica*, *Zygosaccharomyces rouxii* or *Schizosaccharomyces pombe*.

13. (previously presented) A genetically transformed yeast which is a yeast containing one or more copies of a heterologous DNA sequence encoding GAPN operatively associated with an expression signal and having a functional native or heterologous expression capability for GAPDH.

14. (withdrawn) A method of producing a desired metabolic product with decreased production of an undesired metabolic product, comprising culturing a yeast as claimed in claim 1 wherein the desired metabolic product is the product of the reaction catalyzed by said third enzyme, and the undesired metabolic product is the product of the reaction catalyzed by the second enzyme.

15. (withdrawn) A method as claimed in claim 14, wherein the desired product is ethanol, lactic acid, citric acid, an amino acid or an antibiotic.

16. (withdrawn) A method as claimed in claim 14, wherein said undesired metabolic product is glycerol, acetate or an amino acid.

17. (previously presented) The yeast of claim 11 which is a strain of the genus *Saccharomyces*.

18. (previously presented) The yeast of claim 12 which is a strain of *Saccharomyces cerevisiae*.

19. (new) The method of claim 1 wherein the production of NADH by said yeast by said first metabolic pathway is reduced as a result of the activity in said yeast of said second metabolic pathway.